



White Paper: Experimenting with ways to report and improve alignment of Incident Objectives with Incident Outcomes

September 1, 2009

PURPOSE: This document is an *experiment* in designing more effective processes for tracking outcomes of emergency fire operations with respect to Land and Fire Management Plan direction and incident specific direction. It is intended to assist in assessing and documenting organizational performance – how a group or set of groups move from articulating intent and direction to achieving actual outcomes.

Exploring the links between land management plan direction, Line Officer intent, and outcomes is expected to lead to continuous improvement as we identify ways to better articulate and communicate initial direction, decision-making and risk assessment processes and outcome reporting.

STRUCTURE: The following tables present a side-by-side comparison. Direction, intent and objectives drawn from the Letter of Delegation of Authority and the Wildland Fire Decision Support System (WFDSS) documentation on the left, The processes used, implementation actions taken and responsible parties drawn from Key Decision Logs, 209s and Incident Action Plans (IAP) and other information generated on the Incident on the right.

These are organized around the topic bullets of the Letter of Delegation: strategy, operations, safety, public relations, finances, cultural values, Wilderness, ecology/land management, operations, fiscal effectiveness, decision-making, tribal and. Because KDLs often apply to more than one topic area, these are summarized at the end of the document.

The KDL is a password protected application on the interagency Famweb's test server: <http://famtest.nwcg.gov/fam-web/>. Your feedback is critical in assessing the value and future direction of this experiment. Please contact Anne Black, aebblack@fs.fed.us 406.370.1513.

STRATEGY	
Direction – Intent - Objectives	Responsible party – Process - Action
<ol style="list-style-type: none"> 1. Consider all person-caused wildland fires (not management lighted prescribed fires) as wildland fires and use the appropriate suppression response. 2. Wildland fires shall receive the appropriate suppression response. (see Table 4-8) Timeliness is essential but safety and cost efficiency, while considering the value of the threatened resource, shall guide the fire suppression response strategy. A range of response tactics may be appropriate. Carefully analyze the current and predicted wildland fire situation when determining the appropriate response. 3. Human caused wildfires will be suppressed in every instance and will not be managed for resource benefits. 4. Suppression of wildland fire will use appropriate suppression response and the Minimum Impact Suppression Techniques as outlined in the Forest-wide Fire and Fuels Management Standards and Guidelines. 5. DA - Look for opportunities to manage the fire, as appropriate, to minimize smoke and impacts to wilderness values in a cost efficient manner while providing for firefighter and public safety. 	<p><u>Forest</u> – Initial Strategy to manage as a suppression event under a Limited Perimeter control/ Point Protection strategy.</p> <p>Course of Action: Keep fire: North of Wooley Creek drainage, East of the Marble Rim, South of Box Camp Ridge, West of Lovers Camp Campground and Red Rock Creek.</p> <p>Decision Rationale: This event was converted from a prescribed burn to a wildfire at 1900 8/21/09. This fire is burning within the Marble Mountain Wilderness. It accomplished approximately 900 acres of treatment prior to being converted. The conversion came as a result of unexpected fire behavior/wind pushing the fire into heavy stands of dense, decadent true/red fir located in an area without adequate natural barriers and terrain features to facilitate containment at a relatively small scale. Current indices place conditions in this area at the 97th percentile; widespread burning of this forest type under these conditions will result in undesirable, severe fire effects. The course of action being adopted plans containment lines at the first available natural features/barriers that have a reasonable chance of success while providing for fire fighter safety.</p> <p><u>IMT</u> - Both direct and indirect tactics were considered, and taken where appropriate. S, E and North sides were contained with direct line, the western boundary by indirect line construction and burn out.</p>
<ol style="list-style-type: none"> 6. Locate incident bases, camps, helibases, staging areas, helispots and other centers for incident activities outside Riparian Reserves (RR). If the only suitable location for such activities is within the RR, an exemption may be granted following review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements. Use an interdisciplinary team to predetermine suitable incident base and helibase locations. 	<p><u>IMT</u> – One sling site was located in the bottom of Canyon Creek. This may not have gone through review; however, nothing was disturbed and there has been no indicated from READ that there are concerns with this site.</p>

7. DA - Coordinate IA when near fire, though District will retain responsibility.	<u>Forest-IMT – GACC</u> – Resources were sent to Six Rivers 8/23 (2 helos), and 2 Type 1 were released to meet IA needs elsewhere in the GACC (Modoc). Exclusive Use aviation resources were maintained on incident for staging purposes at the request of the GACC.
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SAFETY	
Direction – Intent - Objectives	Responsible party – Process - Action
DA - Fire-fighter and public safety takes priority over all resource considerations.	<u>All IMT</u> - Standard Operating Procedures: <ul style="list-style-type: none"> • Safety officers in the field • Health reviews • Safety briefings daily in ICP (0600), daily radio briefs (0730), C& G (1700) • Incident within Incident and Medical protocols included in daily IAPs, which are delivered to the field • Special instructions (eg., Bear awareness) in 204s
DA - Safety will be number one consideration in determining strategies and tactics to suppress this fire.	<u>Forest – IMT</u> : direct and indirect tactics were evaluated using a risk management protocol and the tactic chosen best met safety and effectiveness considerations. Aviation used a modified 215a process that implements a Safety Management Systems approach, tentatively called a 215b. Through this, transport missions taken were those required; ground transport options were selected where they best met objectives. <ul style="list-style-type: none"> - The Prospect fire is another way to systematically identify risks associated with a high probability outcome.
DA - Notify Forest Supervisor should any significant accident occur.	<u>Forest – IMT</u> : none, thankfully.

OPERATIONS	
Direction – Intent - Objectives	Responsible party – Process - Action
Apply the minimum impact suppression method to all lands. Control or manage the spread of fire. The suppression method shall be commensurate with the wildland fire's potential to spread or cause undesirable impacts. Firefighter and public safety shall be the highest priority. Select procedures, tools and equipment that least impact the environment. Use hot spot detection devices	<u>IMT –</u> MIST emphasized in IAPs and during daily planning meetings. IR flights daily, with Palm IRs arriving for mop up.

whenever possible. These tactics apply to the mop-up of wildland fires also. Use the appropriate minimum impact suppression methods to control fires.	
Wildland fire suppression actions (for example, firelines) constructed during suppression activities will be rehabilitated to their pre-fire state or blended in with the burned area.	<u>Forest – IMT</u> Forest to transmit mop up and turn-back standards; IMT to implement. The Forest transmitted mop-up and turn-back standards for Harrington. In the absence of hearing otherwise, the team adapted these for Red Rock and proceeded under the assumption that these are the desired standards
Design fuelbreaks to mimic the natural characteristics of the area. On steep ground, design units that are operationally feasible and effective to treat fuels.	<u>Forest and IMT</u> – used indirect tactics with aerial ignition as opposed to hand ignition on western flank.

PUBLIC RELATIONS	
Direction – Intent - Objectives	Responsible party – Process - Action
DA - Establish and maintain excellent public relations, and provide timely and accurate information to local stakeholders.	Public meeting – 8/26 Rotary meeting – 8/27 Inciweb updates, Daily traplines, daily email updates to 104 recipients In this area, traplines and 1:1 personal communication is more effective than more high technology options
DA - Private lands/cooperators – high priority for protection. Involve appropriate cooperators in incident operations and actions.	Daily conference call with stakeholders and NF staff - 1530
DA - Be attentive to Fire Safe councils, and to personnel from CalFire's Siskiyou Ranger Unit.	IMT - Public meeting with residents interested in building a local FireSafe Council – 9/1 Trap line
DA - PAO Pam Bierce primary point of contact for fire related info.	Contacted daily, but the ORCA PIO also works locally
DA - Establish a presence at the Happy Camp/Oak Knoll District office	District staffed by PIO 8/?? – 8/27.

SMOKE	
Direction – Intent - Objectives	Responsible party – Process - Action
DA - Minimize smoke impacts to communities and local users. Strategies should incorporate techniques to minimize long duration smoke impacts to local communities.	<u>Forest- IMT</u> : The method and timing chosen for burning out the area between indirect line in Canyon Creek and the active fire perimeter were designed to minimize smoke duration (3 days of slow burning as opposed to a large, high severity burn out on a single day) and high severity fire behavior. Success of the operation resulted in shorter duration event and thus shorter duration and less overall smoke.

Manage prescribed natural fires and prescribed burns (ignited by humans) to reduce future smoke emissions.	<u>IMT</u> - Burn out technique was chosen specifically to address fire behavior, smoke production and fire effects.
Adhere to applicable State of California air quality laws and regulations. Coordinate with the proper State and local agencies to meet air quality regulations (see Forest-wide Standards and Guidelines for Air Quality, Fire Management).	<u>Forest</u> got Siskiyou Air Quality monitors placed before the team arrived. <u>IMT</u> – coordinated with the County to ensure that they check the monitors when smoke is expected. The incident did not trip any triggers.

FINANCES	
Direction – Intent - Objectives	Responsible party – Process - Action
<p>Fiscal integrity – manage in the most cost-effective manner.</p> <p>Look for opportunities to manage the fire, as appropriate, to minimize smoke and impacts to wilderness values in a cost efficient manner while providing for firefighter and public safety.</p>	<p><u>IMT</u>- IMT engaged in developing a Prospect fire which identified two potentially effective and efficient boundaries, based on different weather and fire behavior scenarios. The largest and longest indicates a 6640 acre event, 96,550 hours of firefighter exposure and \$8.9 million. The other indicates 1500 acres and \$4.3 million.</p> <p>Establishment of the indirect line and moderate weather allowed the Team to successfully burn out 491 acres for a near final fire size of 1373 and a current cost of \$3.5 million.</p> <p>Final cost for the fire is between the 50-75% SCI categories.</p>
Document the measures the team takes for cost containment.	<u>IMT</u> – Use the Key Decision Log and national cost containment reporting form to capture and report.
Emphasize accountability for supplies ordered; loss tolerance within 15%.	<u>IMT- Cache</u> – IMT emphasized need to back-haul supplies with the field operations through briefings and IAPs. The Cache will report final figure to the Fores.
Keep and transmit daily costs in the 209s	<u>IMT</u> – done via daily 209s

CULTURAL VALUES	
Direction – Intent - Objectives	Responsible party – Process - Action
Contact AAR regarding burnout ops and ground disturbing activities such as dozer lines, constructed safety zones, and helispots.	<u>IMT</u> – Worked with Agency Administrator Rep to coordinate and communicate.
Utilize local technical specialists if possible prior to engagement, and in the planning process to identify categories of archaeological sites, and recommend appropriate level of protection in accordance with Forest Service Manual 2360, (Emergency Undertaking) clauses of Section 106 of the National Historic Preservation Act	<u>IMT</u> – no local technical specialists were available prior to engagement; however to the extent possible, IMT coordinated with local District.

Utilize local cultural resource specialists or Native American representatives if possible prior to engagement and in the planning process to identify Native American traditional areas, and protect these areas when possible.	<u>IMT</u> – no cultural specialists were available prior to engagement; however to the extent possible, IMT coordinated with local District.
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WILDERNESS	
Direction – Intent - Objectives	Responsible party – Process - Action
<p>DA - Minimize impacts to wilderness. Manage for wilderness characteristics, natural conditions, and ecological processes within each wilderness. Wilderness and ecology- use MIST within wilderness as long as doesn't compromise fire fighter safety.</p> <p>1. Conduct all fire management activities within wilderness in a manner compatible with overall wilderness management objectives. Give preference to using methods and equipment that cause the least:</p> <ol style="list-style-type: none"> 1. Alteration of the wilderness landscape. 2. Disturbance of the land surface. 3. Disturbance to visitor solitude. 4. Reduction of visibility during periods of visitor use. 5. Adverse effect on other air quality related values. 	<p><u>Forest</u> – <u>IMT</u>:</p> <p>Use and emphasize MIST in strategy, tactics and implementation.</p>
<p>DA - Ranger Haupt or [Forest Supervisor] must approve use of mechanized or motorized equipment in MM W.</p>	<p><u>IMT</u> received approval for intrusions and mechanized equipment.</p>
<p>2. NW Forest Plan and LMP in WFDSS. RAs or AAR will provide info on concerns with management.</p>	<p>Forest provided 2 Resource Advisors to assist IMT towards the end of ignition operations.</p>
<p>DA - Track wilderness intrusions as this is needed for end-of-year reporting</p>	<p><u>IMT</u>- Forest: The IMT distributed the Forest's forms to field operations. As of 8/28, no forms had been received back from the field.</p>
<p>DA - Track all burn out operations and have that info available via GIS at close out.</p>	<p><u>IMT</u> worked with District staff to develop GIS datasets on the Rx boundary, fire progression and burn out operations. These are available as part of the final fire package.</p>
<p>3. Locate fire camps, helispots, and other temporary facilities or improvements outside of the wilderness boundary whenever feasible. Rehabilitate disturbed areas within wilderness to as natural an appearance as possible.</p>	<p><u>IMT</u> – Lovers Spike Camp was established outside of the Wilderness for crews working the northern portion of the fire. Three Spike Camps were established in the Wilderness – Lima Spike on the Eastern flank, H10 served as a spike camp for the southern end until crews were able to move to Frying Pan Spike. Field Ops are working with READs to identify and address repair needs.</p>
<p>4. Minimize the use of motorized equipment and mechanical transport of materials and personnel within wilderness.</p> <p>5. Carefully analyze the need for motorized</p>	<p><u>Forest</u> - <u>IMT</u> – Due to proximity of the fire to the Pacific Crest Trail, the trail was closed temporarily to provide safety for both incident personnel and the public. Trail and road</p>

equipment and obtain prior documented approval. 6. Schedule such work to avoid disturbance to the public.	closures were lifted as soon as practicable.
7. Reduce to an acceptable level the risks and consequences of a wildland fire within or escaping from the wilderness. Assessments of consequences will emphasize potential impacts on residential intermixes, mixed or adjacent landowners, Endangered or Threatened species, etc.	<u>Forest – IMT</u> : the chosen strategy sought to minimize potential for fire escape from Wilderness. The Prospect fire assesses the risks and consequences.

LAND MANAGEMENT	
Retardant	
Direction – Intent - Objectives	Responsible party – Process - Action
<p>Avoid aerial application of retardant or foam within 300 feet of waterways. For more details: http://www.fs.fed.us/rm/fire/wfcs/guideln.htm</p> <p>When Retardant or Foam is used to suppress a wildland fire where it adversely affects any threatened, endangered, or proposed species, or designated or proposed critical habitat, the Forest Service Line Officer must initiate Emergency Consultation with the FWS and/or NMFS. The Forest Service unit should coordinate with the local FWS or NMFS office to monitor, determine significance of effects, and design appropriate responsive measures. For reporting requirements: http://www.fs.fed.us/rm/fire/wfcs/guideln.htm</p> <p>Minimize delivery of chemical retardant, foam, or additives to surface waters. An exception may be warranted in situations where overriding immediate safety imperatives exist, or, following review and recommendation by a resource advisor, when an escape would cause more long-term damage</p>	<p>IMT – No retardant or foam was necessary. We were able to use water exclusively for suppression and fire behavior moderation work.</p>
Weeds	
Take steps to minimize introduction of invasive species.	
Aquatic	
Locate water drafting sites to minimize adverse effects on stream channel stability, sedimentation and in-stream flows needed to maintain riparian resources, channel conditions and fish habitat.	<u>Air Ops - Field Ops</u> : There are 3 lakes on the south end of the fire that were acceptable as a water source only for holding.
LSR and ESA	
Intent and objectives: During actual fire suppression activities, fire managers will consult with resource specialists (e.g., botanists, fisheries and wildlife biologists, hydrologists) familiar with the area, these standards and guidelines, and their objectives, to assure that habitat damage is minimized.	Process: Forest and District worked concurrently with the Team to ensure adequate consideration to and protection of impacted species (Spotted owl and habitat, anadromous fisheries). READ showed up on 8/26.

Ensure that the Guidelines for ESA Emergency Consultation are followed, consistent with ESA Section 7 Emergency Consultation requirements.	
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Riparian and Riparian Reserves	
<p>Intent and objectives: In RRs, the goal of wildfire suppression is to limit the size of all fires. When watershed and/or landscape analysis, or province-level plans are completed and approved, some natural fires may be allowed to burn under prescribed conditions. Rapidly extinguishing smoldering CWD and duff should be considered to preserve these ecosystem elements. In RRs, water drafting sites should be located and managed to minimize adverse effects on riparian habitat and water quality, as consistent with ACS objectives.</p> <p>Immediately establish an emergency team to develop a rehabilitation treatment plan needed to attain ACS objectives whenever RRs are significantly damaged by wildfire or a prescribed fire burning outside prescribed parameters.</p>	<p>Process: District and Forest worked with the IMT to develop and implement strategy and tactics with the highest probability of resulting in acceptable burn severity. This entailed initiating a slow backing burn from the ridge to Canyon Creek; establishing the minimum type of holding line at the margin of the riparian area. The District provided a Resource Advisor who worked closely with field operations, particularly in accomplishing suppression repair.</p> <p>READs have not indicated this was the case. Suppression rehab guidelines are expeted to address this specifically, and turn back standards will not be met until these are met.</p>
<p>Outcomes: 25-AUG-2009 A test burn using aerial ignition (ping pong balls) was initiated on 8/25 in the southern area to clean up scattered fuels and harden the southern boundary. As this proved successful, ignition continued along the lower edge of the western fire perimeter. On 8/26 ignition continued to move fire back to the Creek bottom. Limited hand ignition occurred to harden the northern line and keep the western line even. Consequences: IR and aerial reconn showed fire behavior and fire effects to be ideal. This action has allowed managers to move the incident rapidly toward successful conclusion with continued beneficial ecological effects (although only those within the Rx perimeter can be counted).</p>	

Key Decision Logs

21-AUG-2009

DECISION: ORDER TEAM - Order NIMO and a Type 2 team to manage both the Harrington and Red Rock fires.

Rationale: The current location of fire activity on the Red Rock fire suggests this could well be a long duration event. The drainage has significant cultural value to the local tribe. Local experience with local weather anomolies outside of the Wilderness indicate a high potential for problematic fire behavior should the fire breach the Wilderness boundary. NIMO is able to assist us in developing a long duration management plan and can stay as long as it takes to bring this fire to a successful conclusion. However, current fire activity requires a larger team than simply NIMO and we would like a team in place over the next few days it will take for NIMO to arrive and in-brief.

23-AUG-2009

DECISION: DIRECT ATTACK - Going with direct attack line construction on 60% of the fire. (east, south and SW flanks, Divisions A, E, L, and J all have direct line.

Rationale: The course chosen on these divisions had a 95% probability of success because of weather, fire behavior and terrain. Decrease exposure time to fire fighters. Risk from hazard trees was mitigated by falling. Direct attack reduces costs, and lessens impact to communities from smoke.

DECISION: HELIWELL DISPOSITION - The Forest had requested a heliwell be set up near Lovers Camp to ease pressure on taking water from nearby lakes. Due to limited access and concern about hauling water with tenders to support heliwell, IMT have decided to not establish a heliwell.

Rationale: The roads are narrow and steep with limited shoulder access and turnouts. Putting three or four tenders on Forest roads would increase safety concerns and exposure to potential accidents for both firefighters and public. Adequate water sources are available at this time closer to the fire area from nearby lakes and ponds, with approval of the Agency Administrator.

DECISION: SPIKE CAMPS - Use of spike camps for the line personnel instead of having them drive and fly out of the fire area back to base camp.

Rationale: This course reduced exposure time to firefighters from driving on a narrow road with a 1.5 hour drive time. It also reduced the amount of crew shuttles with helicopters in remote areas of the wilderness, and provides more time on the line, at less cost, in a much safer manner.

24-AUG-2009

DECISION: PACIFIC CREST TRAIL CLOSURE ORDER IMPLEMENTATION - The forest signed a closure order for trains and access points surrounding/affecting the fire area. 14 points could be engaged, some by roads, and some by trail. This could present a complicated implementation plan, with high needs for staffing if 100% 24/7 closure is expected.

We organized a short meeting w/ ORCA, NIMO, District staff to agree to a good implementation plan. Posting notices, alternate routes, PCT workarounds, public talking points, and staffing at one key access road were agreed to.

Rationale: The overall plan for closure implementation should be effective at curtailing the vast majority of incursions and meet the objectives for firefighter and public safety. Tryin to implement a 100% closure would be very expensive and logistically challenging to get the amount of required staffing it would take.

DECISION: INDIRECT CONTAINMENT LINE on West flank, Division G, in Canyon creek, instead of direct line construction.

Rationale: Chosen for firefighter safety and efficiency. If direct line had been used, it would be under-slung and the amount of snags falling and rollers would have increased hazards. It would have been difficult to hold. Indirect line 80% probability of success. Direct line 20% probability of success.

25-AUG-2009

DECISION: CANYON CREEK - Establish a holding line at the bottom of Canyon Creek, tie in the north end of the current perimeter with the Creek, and connect similarly on the south end in preparation for burning.

Rationale: The fire moved over the ridge into the Canyon Creek drainage this past weekend. The drainage is steep with a continuous canopy of older red fir stretching from well within the wilderness down canyon into private lands and structures. There are no places along the current fire perimeter on which to establish either direct line or a good holding line except the Creek itself. This means that fire will move further into the drainage. The plan is to use fire to harden the west flank at the northern and southern ends, then slowly back the fire down the ridge to the creek, using ping pongs and hand ignition according to the type of ground involved. This strategy has the highest probability of success as it allows us to choose the time and pace of area under ignition, confining ultimate extent of the fire, smoke and fire effects. Current weather is cooperating, allowing us to pursue this tactic.

Success will result in fully containing the fire within the next week or two. A public meeting is being held tonight.

Outcomes and Learning: 25- 27 AUG-2009

A test burn using aerial ignition (ping pong balls) was initiated on 8/25 in the southern area to clean up scattered fuels and harden the southern boundary. As this proved successful, ignition continued along the lower edge of the western fire perimeter. On 8/26 ignition continued to move fire back to the Creek bottom. Limited hand ignition occurred to harden the northern line and keep the western line even.

Consequences: IR and aerial recon showed fire behavior and fire effects to be ideal. This action has allowed managers to move the incident rapidly toward successful conclusion with continued beneficial ecological effects (although only those within the Rx perimeter can be counted).

ACTION: NOA - Safety briefed IC and Ops and rest of team on potential presence and mitigations for Naturally Occurring Asbestos. Mitigation actions and information regarding NOA were included the 215A, safety message and IAP. The team also developed a JHA for NOA. Mitigations include: minimizing soil disturbance, avoidance of areas, closing of Lima Spike as soon as practical.

Rationale: Region 5 Safety Officer advised the team of the possible presence and we obtained a Forest level map identifying known asbestos mines, known and potential areas containing NOA. There is a possibility of NOA or Naturally Occurring Asbestos near the fire area-east side of Red Rock?and near Lima Spike. However, the potential of NOA is remote.

26-AUG-2009

ISSUE: AIR - Issue was that a Type 3 rappel ship with crew was ordered to the incident without knowledge of the IMT.

Rationale: It appeared to the IMT that the thinking was that the crew could certify for rappel status at the heli-base. This was not acceptable.

ISSUE: MOP UP- TURN BACK STANDARDS - Lack of mop-up and turn-back standards from the Forest prior to initiation of these activities in the field results in the IMT having to make assumptions about what is desired and an increased potential for team not meeting Forest expectations.

Rationale: Mop up began on 8/26 on Lima Division and initial guidance by the IMT to the field was to use a 50' rule of thumb. This moved to 100' as the 50' was achieved, and was then adopted along other flanks as those parts of the fire moved into mop up phase. The assumption was that given a Wilderness fire and scrubby, discontinuous fuel, this was appropriate until definitive direction is obtained from the Forest.

Consequences: Lack of clear direction can result in higher costs and increased exposure, because crews must hang around longer before beginning mop-up and repair work or have to go back to improve initial work. Mop up can become an ever evolving concept. If IMTs could get mop-up expectations early then some steps (such as snagging) can be integrated into the initial burn out prep work.

27-AUG-2009

DECISION: SPIKE CREW TRANSPORT – Crew leads and all equipment operating out of Wilderness helispots will be flown out. Leads will drive vehicles to trail head to pick up all others who will walk out.

Rationale: This limits the exposure of the fire fighters in flying in a helicopter and saves money on flight time.

ACTION: AIR RESOURCES - Whether the 2 Type 1 helicopters remain assigned to the incident as requested when we really don't need them.

Rationale: Not so much the money, because the ships are exclusive use, but the perception presented in the 209s of holding resources when we're nearing containment.

DECISION: RAPPEL PROFICIENCY TRAINING - Require crews that need to conduct rappel proficiency training to do so off incident (off - P code) and not at the incident helibase.

Rationale: Proficiency training is not inherently an incident-based activity, yet can influence incident operations. It is organizationally cleaner to keep these activities separate.

ISSUE: RESOURCE ADVISORS. The timing of arrival and tie-in of READS with the IMT is not ideal. As of 8/24 crews were cold-trailing and hot-spotting on Lima and constructing indirect line and prepping Canyon Creek with hoselays in preparation for burn out. By 8/25 Alpha, Lima, and Juliette were in cold trail, grid and mop up status, yet there had been no tie-in with a READ. 8/26 was the first day ICP/Plans had names to associate with READs, and it was never clear to ICP where these folks would operate for the day, so they were never shown on 204s.

Discussion: In this case, the outcomes have been ok. However, the result is that suppression operations and repair have proceeded without resource advisor input, and a potential safety issue, which is in conflict with LMP and FMP direction as outlined in WFDSS. This sets up incident management (the team comprised of IMT and Forest) for internal confusion, increased duration and cost of the incident and potentially compromised objectives.

DECISION: TEAM TRANSITION - Right size by building a Type 3 team to bring in under NIMO as the ORCA Type 2 cycles out on Monday 8/31.

Rationale: Both fires will very soon be completely contained, with Harrington put into aerial patrol and Red Rock in mop up and patrol status. On Red Rock the SE, S, are currently in patrol, E, NE flanks will complete mop-up today. Ignitions have been complete on the western side and are moving into mop-up and suppression rehab. Thus, there are still logistical and staffing needs so some organization needs to remain until the fire can be turned back to the Forest.

ACTION: COMMUNITY MEETING - IMT and District held a community meeting to explain the fire strategy and proposed tactics.

Rationale: There was a lot of misinformation circulating about when the prescribed fire was begun and uncertainty about the current plan.

28-AUG-2009

ISSUE: PACIFIC TRAIL CLOSURE - Team made recommendation to the Forest to lift the PCT order.

Rationale: Fire behavior no longer poses a high risk to hikers; hikers will no longer complicate operations. It is likely the recommendation will take a couple of days to work its way through the system, since the closure comes under OGC review.

29-AUG-2009

DECISION: GOLF MOP UP - To take a combination of suppression techniques to wrap up Golf. This includes check line, direct, snagging to meet line officer concerns about cost and future fire activity.

Rationale: There is the classic tension between the desire to clean up and clear out as soon as possible and the physics of fire behavior in deep, organic soils, steep slopes, damp riparian areas and snags which dictate a longer, slower approach. Because of roll outs, torpedos, scattered, but intense heat as heavies burn and snags falling a straight direct approach is not safe. Neither is a heavy helicopter and water show practical, efficient nor economical.

30-AUG-2009

DECISION: RESCIND TRAIL CLOSURE - District Ranger will initiate paperwork to rescind closure on the Pacific Crest Trail. The intent is to have the Trail open by Friday, 9/4.

Rationale: Fire complexity is such that it's the appropriate management level. The current process for closures involves the Office of General Counsel, which adds a lag time on

both initiating and rescinding closure orders. Fire activity right now and into the future supports opening the trail to the public.

ACTION: FIRELINE TECHNOLOGY - NIMO brought in 3 members of the GETA group, a small group of on-the-ground firefighters who are experimenting with existing technology to more quickly move information on the ground and between ground and overhead. Technology used on this incident: Tachyon satellite receiving dish at the road accessible spike camp; 'Began' receiving dish with 2'x4' solar photo cell that powered a computer and printer.

Rationale: One of NIMO's charges is to test and develop next-generation fire management tools and processes. This equipment allowed the remote and road accessible spike camps to get and print out IAPs and IR maps before the 0700 radio briefing (remote) or 0630 in-camp briefing (Lovers Spike), and to send info back regarding suppression and repair work. Geo-referenced photos of stumps, spike camps, smokes, fire behavior, fire effects all helped to quickly align Forest Leadership, ICP and field. The technology also allowed the field to send in orders, submit time, and connect to the internet.

DECISION: TRANSITION TO TYPE 3 - Transition to a Type 3 IC will occur at 0600 9/1, with the intent to turn the incident back to the District on Friday, 9/4 at 0600

Rationale: Fire complexity is such that it's the appropriate management level. Harrington is in aerial patrol, as are two of the four divisions on Red Rock. Div A/E is very confident they will have met mop-up standards by end of shift Wed., Div G is shooting for the same. There is more heat on the northern portion - the 'achilles heel' of the incident.

This document was developed by Anne Black, THSP for the Atlanta NIMO team and ecologist/social science analyst for the Rocky Mountain Research Station. Please direct any comments and suggestions to: aeblack@fs.fed.us 406. 329.2126.